WHAT IS CLAIMED IS:

1. An apparatus for controlling transmission antenna arrays for a high speed physical downlink shared channel, which coexists with a dedicated physical channel, from a first base station to a mobile station, for taking into consideration a soft handover between the mobile station and the first through K-th base stations in a mobile communication system, the mobile station comprising:

a first partial weight generating unit for obtaining a first partial weight by equally considering channel characteristics of the first through the K-th base stations;

a second partial weight generating unit for obtaining a second partial weight by emphasizing a channel characteristic of the first base station more than channel characteristics of a second through the K-th base stations; and

a switching unit for transmitting one of the first and second partial weights to the first through the K-th base stations as feedback information according to whether the high-speed packet data is transmitted to the mobile station.

2. The apparatus of claim 1, wherein the switching unit transmits one of the first and second partial weights to the first through the K-th base stations as feedback information according to whether the high-speed packet data is transmitted to the mobile station, when the mobile station is in a soft handover process with the first through the K-th base stations.

3. The apparatus of claim 1, wherein the first partial weight generating unit obtains a first intermediate value by performing addition after an inner product on the channel characteristics of the first through the K-th base stations, respectively, and obtains the first partial weight using the first intermediate value and previous first weight information.

4. The apparatus of claim 1, wherein the second partial weight generating unit obtains a second intermediate value by multiplying channel characteristics of the first base station by a first coefficient, multiplying channel characteristics of the second through the K-th base stations, respectively, by a second coefficient and then performing addition after an inner product on the multiplied channel characteristics of

the first through K-th base stations, respectively, and obtains the second partial weight using the second intermediate value and previous second weight information.

5. The apparatus of claim 4, wherein the first coefficient is greater than the second coefficient.

6. The apparatus of claim 1, wherein the switching unit selects the second partial weight when the high-speed packet data is transmitted to the mobile station through an antenna of the mobile station and selects the first partial weight when the high-speed packet data is not transmitted to the mobile station.

7. The apparatus of claim 6, wherein the switching unit selects the second partial weight from a time when the mobile station recognizes that the high-speed packet data is transmitted to the mobile station to a time when the high-speed packet data transmission is completed.

8. The apparatus of claim 1 further comprising a packet reception indicator detection unit for determining whether the high-speed packet data is transmitted to the mobile station based on a packet reception indicator detected from a signal transmitted from an antenna, and controlling the switching unit according to a result of determination.

9. The apparatus of claim 1, wherein high speed shared control physical channel transmission, a dedicated physical channel transmission, and a high speed physical downlink shared channel transmission are served in the first base station and the dedicated physical channel transmission is served in the second through the K-th base stations, respectively.

10. The apparatus of claim 1, wherein the first base station comprises:

an antenna unit including at least two antennas;

a high speed shared control physical channel transmitting unit for generating first and second weighted spread/scramble signals using a high speed shared control physical channel signal, a first spread/scramble signal, a first weight, and a second weight;

a dedicated physical channel transmitting unit for generating third and fourth weighted spread/scramble signals using a dedicated physical channel signal, a second spread/scramble signal, and the first and second weights;

a high speed physical downlink shared channel transmitting unit for generating fifth and sixth weighted spread/scramble signals using a high speed physical downlink shared channel signal, a third spread/scramble signal, and the first and second weights;

an addition unit for adding a common pilot signal for a first antenna, the first weighted spread/scramble signal, the third weighted spread/scramble signal, and the fifth weighted spread/scramble signal and transmitting a result of the addition to the first antenna, and adding a common pilot signal for a second antenna, the second weighted spread/scramble signal, the fourth weighted spread/scramble signal, and the sixth weighted spread/scramble signal, and transmitting a result of the addition to the second antenna;

a weight decoding unit for decoding partial weight information from feedback information of an uplink dedicated physical control channel transmitted from the mobile station; and

a weight reproducing unit for combining a plurality of latest partial weights in the decoded partial weight information to generates the first and second weights.

11.. The apparatus of claim 10, wherein each of the second through the K-th base stations comprises:

an antenna unit which including at least two antennas;

a dedicated physical channel transmitting unit for generating the third and fourth weighted spread/scramble signals using a dedicated physical channel signal, a second spread/scramble signal, and the first and second weights;

an addition unit for adding a common pilot signal for a first antenna and the third weighted spread/scramble signal, and transmitting a result of the addition to the first antenna, and adding a common pilot signal for a second antenna and the fourth weighted spread/scramble signal, and transmitting a result of the addition to the second antenna;

a weight decoding unit for decoding partial weight information from feedback information of an uplink dedicated physical control channel transmitted from the mobile station; and a weight reproducing unit for combining a plurality of latest partial weights in the decoded partial weight information to generates the first and second weights.

12. A method of controlling transmission antenna arrays for a high speed physical downlink shared channel, which coexists with a dedicated physical channel, from a first base station to a mobile station, for taking into consideration a soft handover between the mobile station and the first through K-th base stations in a mobile communication system, the method comprising:

obtaining a first partial weight by equally considering channel characteristics of the first through the K-th base stations;

obtaining a second partial weight by emphasizing a channel characteristic of the first base station more than channel characteristics of a second through the K-th base stations; and

transmitting one of the first and second partial weights to the first through the K-th base stations as feedback information according to whether the high-speed packet data is transmitted to the mobile station.

13. The method of claim 12, wherein the switching unit transmits one of the first and second partial weights to the first through the K-th base stations as feedback information according to whether the high-speed packet data is transmitted to the mobile station, when the mobile station is in a soft handover process with the first through the K-th base stations.

14. The method of claim 12, wherein a first intermediate value is obtained by performing addition after an inner product on the channel characteristics of the first through the K-th base stations, respectively, and the first partial weight is obtained using the first intermediate value and previous first weight information.

15. The method of claim 12, wherein a second intermediate value is obtained by multiplying channel characteristics of the first base station by a first coefficient, multiplying channel characteristics of the second through the K-th base stations, respectively, by a second coefficient and then performing addition after an inner product on the multiplied channel characteristics of the first through the K-th

base stations, respectively, and the second partial weight is obtained using the second intermediate value and previous second weight information.

16. The method of claim 15, wherein the first coefficient is greater than the second coefficient.

17. The method of claim 12, wherein the second partial weight is selected when the high-speed packet data is transmitted to the mobile station through an antenna of the mobile station and the first partial weight is selected when the high-speed packet data is not transmitted to the mobile station.

18. The method of claim 17, wherein the second partial weight is selected from a time when the mobile station recognizes that the high-speed packet data is transmitted to the mobile station to a time when the high-speed packet data transmission is completed.

19. The method of claim 12, further comprising:

generating first and second weighted spread/scramble signals using a high speed shared control physical channel signal, a first spread/scramble signal, a first weight, and a second weight, generating third and fourth weighted spread/scramble signals using a dedicated physical channel signal, a second spread/scramble signal, and the first and second weights, and generating fifth and sixth weighted spread/scramble signals using a high speed physical downlink shared channel signal, a third spread/scramble signal, and the first and second weights in the first base station; and

adding a common pilot signal for a first antenna, the first weighted spread/scramble signal, the third weighted spread/scramble signal, and the fifth weighted spread/scramble signal, and transmitting a result of the addition to the first antenna, and adding a common pilot signal for a second antenna, the second weighted spread/scramble signal, the fourth weighted spread/scramble signal, and the fifth weighted spread/scramble signal, and transmitting a result of addition to the second antenna, in the first base station;

wherein the first and second weights are obtained by combining a plurality of latest partial weights in partial weight information decoded from feedback information transmitted from the mobile station.

20. The method of claim 19, further comprising:

generating the third and fourth weighted spread/scramble signals using a dedicated physical channel signal, a second spread/scramble signal, and the first and second weights, in each of the second through K-th base stations; and

adding a common pilot signal for a first antenna and the third weighted spread/scramble signal and transmitting a result of the addition to the first antenna, and adding a common pilot signal for a second antenna and the fourth weighted spread/scramble signal and transmitting a result of the addition to the second antenna, in each of the second through K-th base stations;

wherein the first and second weights are obtained by combining a plurality of latest partial weights in partial weight information decoded from feedback information transmitted from the mobile station.

21. A computer program device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for a method of controlling transmission antenna arrays for a high speed physical downlink shared channel, which coexists with a dedicated physical channel, from a first base station to a mobile station, for taking into consideration a soft handover between the mobile station and the first through K-th base stations in a mobile communication system, the method comprising:

obtaining a first partial weight by equally considering channel characteristics of the first through the K-th base stations;

obtaining a second partial weight by emphasizing a channel characteristic of the first base station more than channel characteristics of a second through the K-th base stations; and

transmitting one of the first and second partial weights to the first through the K-th base stations as feedback information according to whether the high-speed packet data is transmitted to the mobile station.